REMARKS

Reconsideration of this application is requested.

Submitted herewith is a Figure 1A. Although the proposed drawing correction is submitted herewith, the applicants traverse the requirement for an additional drawing. The applicants believe that the Cu_2Sb crystallography is well known in the art and a drawing thereof beyond that which is contained in the application is unnecessary. The Examiner is referred to the enclosed portion of *CRYSTAL STRUCTURES* by Ralph W. G. Wyckoff, Second Edition, Volume 1, Interscience Publishers, pgs. 360-362. There the iron arsenide structure described which has the same crystal structure as the Cu_2Sb.

Claims 1-17 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite in the use of the term "Cu_2Sb type structure." The Examiner is referred to a variety of references which show that the use of the word "type" in conjunction with the description of crystal structure is common in the metallurgical arts and does not render the claim indefinite. For instance, the Saito et al. U.S. patent no. 5,770,333 describes various crystal structure types such as the CaF_2 type, the ZnS type, the AlLiSi type, etc. It is clear that the use of the word "type" is common terminology in this art. Moreover, the illustrations in *The Journal of Power Sources*, 113 (2003) are similar to the illustrations used in Figure 1 of the instant application and are adequate to describe the invention. Accordingly, it is respectfully suggested that the rejection under §112 be withdrawn. However, Figure 1A is enclosed herewith in the event the Examiner determines another drawing is required. The question the Examiner raised

about two different types of atoms in Figure 1 illustrates the two different Cu ions in the structure.

The Examiner rejected claim 2 as requiring both an amorphous and crystalline structure in that the Examiner interpreted the phrase "fully disordered structure or a partially disordered structure" as describing an amorphous or partially amorphous material. The Examiner is incorrect in her understanding of the term "partially or fully disordered." The clause does not refer to an amorphous material. For this, the Examiner is directed to the third paragraph under "The Detailed Description of the Preferred Invention" which is at the top of page 7 of the application. The disordered/ordered structure refers to highly crystalline structures in which all the different atom types reside in a specific crystallographic sites that are defined by crystal symmetry, these are called ordered. Alternatively, the highly crystalline structures may be disordered in which case the different atom types occupy the same crystallographic sites, so that both ordered and disordered crystalline structures will provide characteristic crystalline x-ray diffraction patterns and neither will be the amorphous structure assumed by the Examiner. Accordingly, it is suggested that the rejection of claim 2 be withdrawn.

Claims 1-12, 14 and 16 were rejected under 35 U.S.C. §102(e) as being anticipated by the Inagaki et al. U.S. patent no. 6,541,157. The applicants traverse this rejection. As presently presented, the claims of the present invention call for negative intermetallic electrodes or compounds which are crystalline in their initial state. This recitation in claims 1-17 clearly distinguish the Inagaki et al. patent, in

which the Mn_2Sb material is synthesized by heating the metallic elements to 600°C under an argon atmosphere which is close to the melting point of antimony (630°C). In contradistinction, the inventive electrodes are synthesized by high energy ball milling at room temperature in either air or argon resulting in a crystalline compound, see Figs. 3 and 5, in which the x-ray diffraction peaks therein are consistent with the published crystallographic data for Mn_2Sb and Cu_2Sb materials in the international x-ray powder diffraction files, PDF-89-4962 and PDF-87-1176, again Figs. 3 and 5 of the present application. In contrast, the '157 patent shows a single x-ray diffraction peak which indicates that the product is non-crystalline in nature. Accordingly, the subject invention which provides crystalline material in its initial state, or as prepared, is different from the material prepared by the method set forth in the '157 patent .

In addition, claims 18-22 have been added to specifically refer to the material made by the method disclosed in the present invention. Claims 18-20 define a method of making the material and claims 21 and 22 define the material by their x-ray. Accordingly, it is respectfully suggested that the Examiner withdraw the rejection of the claims under 35 U.S.C. §102(e).

Claims 13, 15 and 17 were rejected under 35 U.S.C. §103(a) being unpatentable over the Inagaki et al. '157 patent, previously identified. This rejection should be withdrawn because the material, as previously discussed, prepared according to the method of Inagaki et al. does not produce a crystalline material, but rather an amorphous material, and therefore, cannot be used under 35 U.S.C. §103 as a basis for rejecting the claims at issue.

For all the foregoing reasons, it is respectfully suggested that each of the claims in the present application as now presented is drawn to patentable subject matter and the allowance of claims 1-22 is respectfully requested.

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Respectfully submitted,

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